Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (previously presented) A recombinant immunoconjugate, comprising a therapeutic agent or a detectable label covalently linked to an RFB4 disulfide-stabilized Fv (dsFv) having a variable heavy chain (V_H) comprising SEQ ID NO:2 in which a Cys residue is substituted for Arg at position 44; and a variable light chain (V_L) comprising SEQ ID NO:4 in which a Cys residue is substituted for Gly at position 100.

2. (original) The recombinant immunoconjugate of claim 1, wherein said therapeutic agent is a toxin.

3. (original) The recombinant immunoconjugate of claim 2, wherein said toxin is a *Pseudomonas* exotoxin (PE) or a cytotoxic fragment thereof.

4. (original) The recombinant immunoconjugate of claim 3, wherein said cytotoxic fragment is PE38.

5-6. (cancelled)

7. (previously presented) The recombinant immunoconjugate of claim 3, wherein said variable heavy (V_H) chain is covalently linked to the carboxyl terminus of said toxin.

8. (currently amended) The recombinant immunoconjugate of claim ~~5~~ 1, wherein said V_H chain is covalently linked to said V_L chain through a linker peptide.

9. (currently amended) The recombinant immunoconjugate of claim ~~5~~ 1, wherein said V_H chain is linked to said V_L chain through a cysteine-cysteine disulfide bond.

10. (original) The recombinant immunoconjugate of claim 8, wherein said linker peptide has the sequence of SEQ ID NO:5.

11. (previously presented) An expression cassette encoding a recombinant immunoconjugate comprising a sequence encoding for a toxin peptide and an RFB4 disulfide-stabilized Fv (dsFv) having a variable heavy chain (V_H) comprising SEQ ID NO:2 in which a Cys residue is substituted for Arg at position 44; and a variable light chain (V_L) comprising SEQ ID NO:4 in which a Cys residue is substituted for Gly at position 100.

12. (cancelled).

13. (original) The expression cassette of claim 11, wherein said toxin is a *Pseudomonas* exotoxin (PE) or a cytotoxic fragment thereof.

14. (original) The expression cassette of claim 11, wherein said cytotoxic fragment is PE38.

15. (cancelled)

16. (currently amended) The expression cassette of claim ~~12~~ 11, further comprising a sequence encoding for a linker peptide having the sequence of SEQ ID NO:5.

17. (original) A host cell comprising an expression cassette of claim 11.

18-49. (cancelled)

50. (previously presented) A recombinant immunoconjugate, comprising a therapeutic agent or a detectable label covalently linked to a recombinant RFB4 disulfide-stabilized Fv (dsFv) antibody having a variable heavy chain (V_H) with a cysteine at amino acid position 44, which heavy chain comprises the complementarity determining regions (CDRs) of SEQ ID NO:2 and is at least 90% identical to SEQ ID NO:2; and a variable light chain (V_L) with

a cysteine at amino acid position 100, which light chain comprises the CDRs of SEQ ID NO:4 and is at least 90% identical to SEQ ID NO:4.

51. (previously presented) The recombinant immunoconjugate of claim 50, wherein said therapeutic agent is a toxin.

52. (previously presented) The recombinant immunoconjugate of claim 51, wherein said toxin is a *Pseudomonas* exotoxin (PE) or a cytotoxic fragment thereof.

53. (previously presented) The recombinant immunoconjugate of claim 52, wherein said cytotoxic fragment is PE38.

54. (currently amended) An expression cassette encoding a recombinant immunoconjugates of claim ~~51~~ 50.

55. (previously presented) A host cell comprising an expression cassette of claim 54.

56. (currently amended) A recombinant immunoconjugate, comprising a therapeutic agent or a detectable label covalently linked to a recombinant RFB4 disulfide-stabilized Fv (dsFv) antibody having a variable heavy chain (V_H) with a cysteine at amino acid position 44, which heavy chain comprises the complementarity determining regions (CDRs) of SEQ ID NO:2 and is at least 95% identical to SEQ ID NO:2; and a variable light chain (V_L) with a cysteine at amino acid position 100, which light chain comprises the CDRs of SEQ ID NO:4 and is at least 95% identical to SEQ ID NO:4.

57. (new) A method for inhibiting the growth of a malignant B-cell that expresses a CD22 molecule on the surface of the cell, said method comprising:

contacting said malignant B-cell with an effective amount of a recombinant immunoconjugate comprising a therapeutic agent or a detectable label covalently linked to an RFB4 disulfide-stabilized Fv (dsFv) having a variable heavy chain (V_H) comprising SEQ ID

NO:2 in which a Cys residue is substituted for Arg at position 44; and a variable light chain (V_L) comprising SEQ ID NO:4 in which a Cys residue is substituted for Gly at position 100, thereby inhibiting the growth of the malignant B-cell.

58. (new) The method of claim 57, wherein said therapeutic agent is a *Pseudomonas* exotoxin (PE) or a cytotoxic fragment thereof.

59. (new) The method of claim 58, wherein said cytotoxic fragment is PE38.

60. (new) The method of claim 58, wherein said variable heavy chain is covalently linked at the carboxyl terminus of said therapeutic agent.

61. (new) The method of claim 57, wherein said V_H chain is covalently linked to said V_L chain through a linker peptide.

62. (new) The method of claim 57, wherein said V_H chain is linked to said V_L chain through a cysteine-cysteine disulfide bond.

63. (new) The method of claim 61, wherein said linker peptide has the sequence of SEQ ID NO:5.

64. (new) The method of claim 57, wherein said malignant B-cell is contacted *in vivo*.

65. (new) The method of claim 57, wherein said malignant B-cell is selected from the group consisting of: a rodent B-cell, a canine B-cell, and a primate B-cell.

66. (new) The method of claim 57, wherein said malignant B cell is a chronic lymphocytic leukemia cell.

67. (new) The method of claim 57, wherein said malignant B cell is a hairy cell leukemia cell.

68. (new) The method of claim 57, wherein said malignant B cell is a prolymphocytic leukemia cell.

69. (new) The method of claim 57, wherein said malignant B cell is a B cell lymphoma cell.

70. (new) A pharmaceutical composition comprising an effective amount of a recombinant immunoconjugate of claim 1.

71. (new) A pharmaceutical composition comprising an effective amount of a recombinant immunoconjugate of claim 50.

72. (new) A pharmaceutical composition comprising an effective amount of a recombinant immunoconjugate of claim 56.